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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,012	11/02/2001	Benjamin N. Eldridge	20206-15	3257
7590 10/20/2004			EXAMINER	
Woodard, Emhardt, Naughton, Moriarty and McNett			NGUYEN, VINH P	
Bank One Center/Tower			ART UNIT	
Suite 3700			PAPER NUMBER	
111 Monument Circle			2829	
Indianapolis, IN 46204-5137			DATE MAILED: 10/20/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/003,012	Applicant(s) ELDRIDGE ET AL.	
	Examiner VINH P NGUYEN	Art Unit 2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-10, 12-16 and 27-41 is/are pending in the application.
- 4a) Of the above claim(s) 6-9, 13-16 and 41-44 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3, 5, 10 and 12 is/are allowed.
- 6) ☒ Claim(s) 27, 35, 36 and 40 is/are rejected.
- 7) ☒ Claim(s) 28-31, 37-39 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/13/04 has been entered.

2. Claims 35-39 objected to because of the following informalities:

In claims 35-37 and 39, it is unclear what "means for reducing a temperature gradient" represents. Is it the same as "energy transmissive element".

Depend Claim 38 is also objected to since it shares the same indefiniteness with objected claims,

Appropriate correction is required.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 27,35,36 and 40 is rejected under 35 U.S.C. 102(b) as being anticiapted by Carlin et al (Pat # 5,124,639).

As to claim 27, Carlin et al disclose an apparatus having a probe card with a plurality of probes for making contact with an electronic device under test (wafer). Carlin et al also mention that it would have been well known to use a stiffener for preventing the probe card from warping

due to a high temperature (see column 2, lines 23-26). It appears that the stiffener is equivalent to “an energy transmissive element” because it has the same function as the one in the instant claim.

As to claim 35, Carlin et al disclose an apparatus having a probe card with a plurality of probes for making contact with an electronic device (wafer under test). It is noted that the probe card has a device side (bottom surface) faces the wafer under test and a second side (top surface) opposite the device side. Carlin et al also mention that it would have been well known to use a stiffener for preventing the probe card from warping due to a high temperature (see column 2, lines 23-26). It appears that the stiffener is equivalent to “means for reducing a temperature gradient between the device side and the second side of the probe card” because it has the same function as the one in the instant claim.

As to claim 36, it appears that the stiffener is disposed on at least one of the device side and the second side.

As to claim 40, it appears that the temperature gradient is induced when the electronic device (wafer under test) is tested.

5. Claims 1-3,5,10,12, are allowable since the prior art does not disclose an energy transmissive element for transmitting energy to selectively deflect a portion of the probe card and

for controlling the geometric planarity of the probe card and a temperature sensor located near the energy transmissive element for monitoring temperature corresponding to deflection of the probe card.

6. Claims 28-31,41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art does fails to disclose energy transmissive elements for affecting a temperature on the device side and second side of the probe card and a temperature sensor for monitoring the temperatures on the first device side and a second side of the probe card.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kimura et al (Pat #5,521,523) disclose probe card assembly thermal influenced from the wafer during probe test.


Kister (pat # 6,064,215) disclose high temperature probe card for testing integrated circuits

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINH P NGUYEN whose telephone number is (571)-272-1964.

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The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
VINH P. NGUYEN  
PRIMARY EXAMINER  
ART UNIT 2829  
10/15/04